strated by the following extract from the Stevens Point Journal of January 25, 1902, descriptive of a geographical display at the Wisconsin State Normal School at that place:

There is in the geography room at the normal the most pleasing and instructive exhibition ever prepared by the school in that line. The work has been done by the students through Miss De Riemer's suggestions. Miss De Riemer also furnished considerable material such as is not easily procured. A large part of the exhibit consists of pictures showing scenery, industries, cloud types, and racial characteristics.

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Suspended from the ceiling is the model of a kite such as is used by the United States weather service for scientific purposes. A large number of very excellent maps are on exhibition, showing a variety of physical features. That which is most in evidence is a scrap book showing what a wealth of information may be put together in such form. The number and variety of the flags flying indicate all sorts of weather that the Bureau is able to provide.

In regard to the meteorological features of the display, Miss Alice De Riemer writes as follows:

In the meteorological corner we had weather maps, charts, many beautiful cloud and fog views, forms of snow crystals, models of weather vanes, rain gage, and anemometer, made by the students, with descriptions and cuts which I had collected. Indeed, it was a miniature exposition, and such a revelation to many of these young people who have had such limited opportunities.

Another time I plan to have several of the students give short talks, during certain hours, describing certain features of the several exhibits. However, our first attempt has been a grand success. All the city teachers were in to-day, and I have just had a communication from a superintendent in one of the adjoining towns asking for the privilege of bringing some of his teachers over to see it.

Miss De Riemer is to be congratulated upon the success of her exposition. Its installation and the preparation of the models of instruments were no doubt useful exercises in manual training, and the exhibition itself an excellent object lesson in meteorology. Other teachers will do well to use it as a model.—*H. H. K.*

PERNTER'S METEOROLOGICAL OPTICS.

The Director of the Central Institute for Meteorology and Terrestrial Magnetism, Prof. Dr. J. M. Pernter, has begun the publication of a work on meteorological optics (for sale by the firm of W. Braumueller of Vienna and Leipsic), which we most heartily commend to the numerous correspondents who write inquiring as to the explanation of the various optical phenomena that are to be observed in the sky. The first chapter of this work gives an account of the apparent curvature of the dome of the sky; of the connection between our estimates of angular altitudes and the true altitudes of objects seen in midheaven, explaining why such estimates differ in the presence of sunshine and moonshine, and why objects of a circular outline, such as halos, appear distorted into egg-shaped ovals. Professor Pernter has lectured and written frequently for twenty years past on this topic and the explanations of halos, parhelia, red sunsets, and other phenomena that will be given in another part of his volume will undoubtedly make available to us all that is known on the subject and all that is to be found in the very widely scattered literature. The Editor will occasionly translate portions of this volume for the benefit of the readers of the REVIEW, but those who are at all familiar with German should possess the original.—*C. A.*

SECOND MEXICAN CONGRESS OF METEOROLOGY.

The Second National Meteorological Congress convened by the Scientific Society Antonio Alzate, in the City of Mexico, December 17–20, 1901, has published a short report from which we perceive that there is established a permanent committee of the International Meteorological Congress which prescribes the general character of these congresses as to membership and communications. The annual dues are $5, and the president of the committee is Señor Prof. Mariano Leal, Director of the Secondary School, Leon, Guanuajuato, Mexico. A preliminary program of this congress will be found in the MONTHLY WEATHER REVIEW, November, 1901, page 512. About fifty members were present. Following the reading of papers, as announced in the preliminary program, corresponding resolutions were formulated and adopted expressing the opinions and wishes of the society. Among these we find under the heading "The prediction of the weather;" three relating to telegraphic work, a fourth urging the increase of stations for temperature and rainfall, a fifth urging the prediction of local weather for short periods, sixth, the study of methods of prediction for long periods, and, finally, that the local weather predictions be announced to the public by means of the signals used in the United States.

Under the heading of "Resolutions relative to the study of storms," the congress appointed a committee to collect data relative to the storms in Mexico and report to the next congress.

Under the heading of "Resolutions relative to self-registering apparatus" the congress recommends: (1) that important observatories constituting the centers of sectional systems of stations be provided with self-registers; (2) that the equipment for each station include thermograph, barograph, hygrograph, pluviograph, and anemograph; (3) said observatories publish the hourly values deduced from these curves in the "Annals of Mexican meteorology;" (4) that the permanent committee distribute instructions as to the use of these instruments.

Under the heading of "Resolutions relative to the applications of climatology to agriculture" the congress recommended: (1) that observations be made on the relation between rainfall and the superficial or subterranean deposits depending thereon within the national territory; (2) the coordination of rainfall with hygrometry both superficial and subterranean; (3) the appointment of a special commission to correspond with the government on these matters; (4) that the regulation of currents and deposits in rivers and lakes is necessary for the improvement of the public health and the preservation of the forests; (5) in order that these beneficial results may be attained, the congress recognizes the necessity of expedition in public works and legislation; (6) that meteorological observatories, when appropriately located, study *(a)* phenology, *(b)* actinometry, *(c)* the appearance of injurious insects, animals, fungi, and vegetables, *(d)* the prediction of hailstorms; (7) that the efforts being made in Europe to prevent hail by the firing of cannon be studied.

With reference to the thermometer exposure the congress appointed a committee to make a comparative study of the exposures used in Russia, France, and England, and of the aspiration thermometer of Assmann.

With reference to the dissemination of meteorological knowledge the congress recommended to the minister of public instruction and other authorities (1) that elementary meteorology be introduced into the primary schools; (2) that each school have a collection of instruments, and that the scholars in the last year of the course periodically assist in maintaining the station record; (3) that the meteorological bulletins be distributed freely, or at a very moderate price; (4) that there be a meteorological committee for each locality; (5) that the directors of the observatories be requested to publish promptly monthly summaries of local phenomena, especially rainfall; (6) that there be monthly public conferences relative to meteorology at educational centers and in scientific societies; (7) that whenever interesting meteorological phenomenon occur the directors or professor of physics explain them scientifically in the public press and seek to destroy popular prejudices and absurd theories; (8) that there be formed a general association of all the meteorologists of the republic to be known as the national association and having the per-